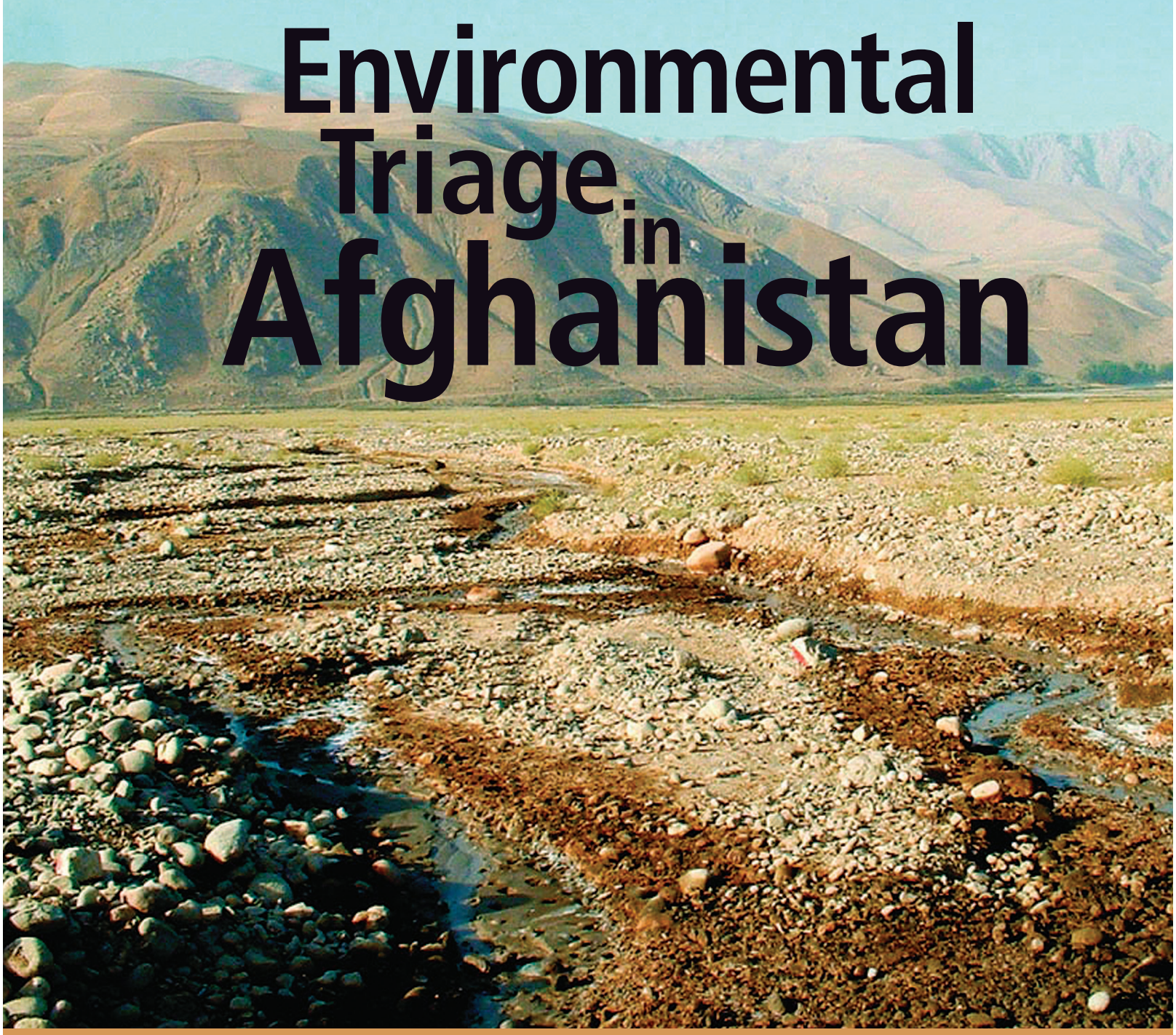
Environmental Triage in Afghanistan



Since the conflict that ended Taliban rule in late 2001, Afghanistan has made fitful starts toward recovery. The resumption of services and rebuilding of roads is encouraging, but even taking stock of the devastation remains at an early stage. However, a January 2003 report by the United Nations Environment Programme (UNEP) titled *Afghanistan: Post-Conflict Environmental Assessment* lays the groundwork for that aim by examining the current state of Afghanistan's human and environmental health.

Working with the interim Afghan government, a team of 20 experts visited urban and rural sites and conducted triage on the country's environment. A triple blow—four years of drought, nearly a decade of neglect under the Taliban, and the pounding of three major wars since 1980—has left Afghanistan with near total loss of its wetlands, severe and widespread erosion, and

Lower right: Morris Carpenter/Panos Pictures; all other images: UNEP

Victims of war. The ravages of three major wars in just over two decades have decimated Afghanistan's environment and public health. Common postconflict scenes show industrial pollution, environmental contamination by human and medical wastes, agriculture devastated by drought, and the maladies that arise from malnutrition and poverty.

an urgent water crisis, UNEP found. Rural Afghans "have seen many of their basic resources—water for irrigation, trees for food and fuel—lost in just a generation," says UNEP executive director Klaus Töpfer.

The UNEP report portrays what people familiar with Afghanistan recognize as "a wild and culturally rich country," but one "that has been so much destroyed," says Laurence Laumonier-Ickx, a principal program associate with Management Sciences for Health (MSH), a Boston, Massachusetts–based nonprofit organization that provides education and management tools to help nations improve their health care systems. Laumonier-Ickx has seen the country through two decades of struggle, starting with a health program she joined in 1980. Now with a project funded by the U.S. Agency for International Development (USAID), she has returned several times in the past year as a health services advisor.

What once was Kabul . . . The rubble of buildings in the city center, where children salvage from the ruins whatever material they think they will be able to sell, stands in testament to the destruction and the need to rebuild for future generations.

The UNEP report was intended for two main audiences: Afghan leaders, for whom the report outlines a planning framework for policy directions, and donor countries, to show where Afghanistan needs help. Since December 2001, an international consortium led by the United States, Japan, and the European Union has pledged more than $3 billion to rebuild the country's system of roads, schools, and health facilities. In April 2002, the Afghan government formulated a national development framework, a policy blueprint for the country's reconstruction. This national strategy is wide-reaching and includes provisions for security, administrative and financial reform, and gender equality following the Taliban legacy of extreme discrimination against women and girls. To ensure that Afghans hold the reins to recovery, international donor funding must fit within that framework, focusing on priorities that Afghan leaders have identified.

Afghanistan's statistics are sobering. The infant mortality rate remains among the world's highest at 25%. The country also has one of the highest maternal mortality rates in the world: 1,600 per 100,000 live births. Water tables have shrunk drastically across the country; in some urban areas, just 12% of residents have access to safe water, according to UNEP. Drinking water tests showed high levels of *Escherichia coli* and other pathogens. Over a third of the country's health facilities were damaged or destroyed in wartime, and less than half of them have safe water, according to a national assessment performed by MSH at the request of the Afghan Ministry of Health.

Most Urgent

UNEP ranks deficiencies in drinking water access and waste management as the greatest threats. In Herat and Kandahar, municipal waste dumps were found to be located in dry riverbeds; heavy rains eventually will flood the beds and inundate each city with hundreds of tons of waste. In Kabul, one dump site was upstream and very close to a drinking well area that serves an increasing number of people. Two million refugees returned to Afghanistan in 2002, and another 1.5 million are expected this year. As the demand for water mounts, the report notes, "the stresses on an already inadequate system will worsen."

To improve drinking water quality, the report recommends that the relevant government ministries start testing water for *E. coli*, total coliforms, and chlorine residue (where chlorination is used), stop the uncontrolled drilling of deep wells, and establish a sanitary zone of at least 30 meters (and preferably 300 meters) around all sources of water supply.

As a first step toward better waste management, UNEP urges that medical waste be kept separate from other sources because it is more likely to carry pathogens. Laumonier-Ickx says USAID is funding construction of 400 clinics through the Ministry of Health. Benjamin Loevinsohn, a senior public health specialist at the World Bank headquarters in Washington, D.C., says the bank is funding equipment for burning or burying medical waste, methods that, despite their own environmental drawbacks, are an improvement over the current situation. "It's about making strategic choices," says Loevinsohn. "Finding [appropriate] interventions is a worthwhile challenge for all of us."

Loevinsohn also notes that practicality is a plus, and points to a project in which the

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Ministry of Health promotes storing water in narrow-necked containers. These containers prevent people from putting their hands in the water and recontaminating it with coliform bacteria and other contaminants. The containers also restrict the water surface exposed to mosquitoes and various pathogens. The technique is small-scale but more practical than large-scale water treatment. Furthermore, Loevinsohn says, early tests near Herat showed that using these containers resulted in a 40–80% reduction in diarrheal disease.

Breaking a Cycle

Like its people, Afghanistan's rich northern woodlands have suffered from political instability. When local forest management regimes broke down, people hoarded fuelwood as insurance against chaos. Pistachio trees that in 1977 had covered over half the land area of Badghis province, each producing up to 50 kilograms of nuts annually (with income of US$1 per kilogram), disappeared. In 1975, the Sistan wetlands at the Iran border sustained hundreds of thousands of waterfowl from more than 100 species, including 8 threatened species. The UNEP team found these wetlands to be almost totally completely dried up, and residents spoke of the birds' decline. Flamingos have not bred there for years. Afghanistan has no management for wildlife conservation.

Ahmad Yusuf Nuristani, Afghanistan's minister of irrigation, water resources, and environment, told the BBC News for its 7 February 2003 online edition, "The report makes it clear how conflict causes environmental destruction." He noted interlocking forces: people fight over scarce natural resources, and their conflict depletes those resources further. "Effective environmental management is the key to breaking this vicious cycle," he said.

Some commentators see a growing international movement to revise war policies to recognize this cycle and defuse it, wrote Cynthia Wagner, managing editor of *The Futurist*, in the May–June 2003 issue of that magazine. Awareness of this linkage goes back at least a decade. "In the complex web of causes leading to social and political instability, bloodshed, and war, environmental degradation is playing an increasingly important role," Nigel Twose wrote in the 1991 book *Greenwar: Environment and Conflict in the Sahel*. In November 2002, UN secretary-general Kofi Annan marked the first International Day for Preventing Exploitation of the Environment in War and Armed Conflict by declaring, "Modern warfare needs environmental rules, just as earlier wars highlighted the need to regulate the impact of war on civilians and prisoners of war." Regulating how armies limit the environmental impact of war would require that countries incorporate such rules into their military manuals.

Moving Ahead?

U.S. assistance has focused on building basic infrastructure in transportation, communications, and schools, but the fiscal year 2003 budget does include more than $3.8 million for health, water, and irrigation activities (including clinics and mobile health teams) in two provinces, and $1 million for the Afghan Conservation Corps. For now, says Laumonier-Ickx, USAID workers are focusing on the main killers: pneumonia, measles, whooping cough, diarrhea, malaria, and malnutrition. The last three are closely linked to the environment. Her project trains village workers to address these killers by educating them on better sanitation and teaching them how to make rehydration formula for diarrhea, implement safe water techniques (such as identifying clean water sources), and offer better curative treatment when needed.

"The bottom line is the community health worker," says Laumonier-Ickx. Communicating through village health workers is a cost-effective way to advise communities on how to avert diarrhea, where to site wells to avoid disrupting groundwater tables, and when it is unsafe to use stream water. Local leaders, she has found, are often open to new ideas that improve local health. And educating mothers on better sanitation and water for their children is key to long-term improvements for two reasons: their improved understanding can help to reduce infant mortality, and they then teach their children better methods that yield generational improvements. Educating mothers will require that many more women be trained as health workers; few of the country's basic health facilities have female staff.

Security threats posed by regional warlords remain a problem. A UN demining team was attacked in February 2003, and in March a UN convoy in Wardak province was robbed at gunpoint. Other disturbing incidents have occurred even more recently, including the murder of a Red Cross field delegate in Uruzgan province. Such incidents have caused several international nongovernmental organizations to suspend their work in parts of the south. "All of the reconstruction effort in Afghanistan is vulnerable to security shocks and donor attention span," observes Paul Barker, country director for CARE International in Kabul, a private international humanitarian organization dedicated to ending poverty.

Barker calls the UNEP report substantially correct, but noted it did not mention depleted uranium (DU), a weaker radioactive form of the element used in new long-range weapons and armor. For example, in recent warfare, DU-armored missiles have been used to penetrate caves. The health impact of DU munitions is debated; a UNEP assessment of postwar Kosovo indicated that environmental contamination with DU was very limited. The U.S. Department of Defense says that except where an individual has been hit by DU shrapnel, no uranium-related health effects are likely. Still, because possible health effects of exposure include kidney damage, a World Health Organization fact sheet recommends that DU levels be monitored in places where significant amounts might contaminate food or water. The lack of discussion of DU is "an interesting oversight" in the UNEP report, Barker says.

UNEP replies that its team could not visit certain regions, including the Tora Bora mountains, where DU weapons might have been used. But UNEP has offered to study DU impact when the security situation improves, according to Nick Nuttall, UNEP head of media services. Barker notes that some sources argue that DU weapons may have been used against some hardened targets in Kabul and the Shomali Valley, and that both areas could easily be investigated now.

Whatever its shortcomings, the report does mark a step in raising the profile of environmental issues in Afghanistan. Having supported the establishment of the Ministry for Irrigation, Water Resources, and Environment in July 2002, Nuttall says, "UNEP is keen to see the environmental projects as part of the donor agenda in Afghanistan." At the same time, the country's Ministry of Health is "moving the health sector forward after years of neglect," notes MSH founder and CEO Ron O'Connor.

In the rush of world events since the U.S.–Afghan conflict, the main risk is that international donors will lose sight of Afghanistan's plight. Ashraf Ghani, Afghanistan's finance minister, noted in the 14 April 2003 edition of *The Washington Post* that per capita aid to his country has lagged behind aid to postwar Kosovo and Bosnia. Afghanistan stands at a crossroads, he says; it can, with support, become a self-sufficient, prosperous country. However, if donor countries retreat from their commitments, "Afghanistan will become a narco-terrorist state that will be a constant problem to the world."

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